

Welcome to the **MAY 2012** edition of the WDFW Climate News Digest. Here you will find highlights of climate change news, events and resources for WDFW staff. Feedback or suggestions for items to include in future editions are much appreciated – *thanks* to those who have sent links and references and please keep them coming. We are particularly interested in projects or issues you may be involved in which have a climate change component. Many thanks!

WHAT'S HAPPENING AT WDFW?

Selected projects, agency resources and initiatives

Climate Change and the Priority Habitat and Species list (PHS)

How should climate change considerations be integrated into the [Priority Habitat and Species](#) criteria and list? Jeff Azzerad and others working on the Technical Advisory Group for the PHS update are working on this question, as well the question of how to integrate the principles of the Conservation Initiative. Initial recommendations center on the issue of climate change as a stressor that may influence a species status, and the fact that priority areas may shift (for example breeding and migratory areas) in response to climate change drivers. Draft language is currently being developed for review and comment.

Habitat Restoration and Salmon Recovery

WDFW is also participating in a project with the Skagit Climate Science Consortium and the Skagit Watershed Council to develop a workshop focused on how to address climate change in the context of selecting and designing habitat restoration projects. The workshop is tentatively scheduled for October of this year. The hope is that the workshop curriculum will provide guidance for the full range of project components – from site selection and design to monitoring and adaptive management. Bob Warinner sits on the planning team for WDFW.

UPCOMING EVENTS

The 3rd Annual Pacific Northwest Climate Science Conference

The 3rd Annual Pacific Northwest Climate Science Conference will be held in Boise, Idaho on October 1–2, 2012. The Conference Committee is currently accepting [proposals for Special Sessions](#). The Committee invites proposals on various themes related to climate change and climate impacts research focused on the Pacific Northwest, including (but not limited to), Agriculture and Climate, Landscape Conservation Cooperatives, Adaptation and Mitigation activities, Climate Change Communication, Hydrologic Impacts, Human Health and Climate Change, and Regional Research Collaborations.

RESOURCES

Global Climate Change Primer (attached).

This primer on the science behind global climate change was developed by the Climate Impacts Group at the University of Washington in 2005. Designed for non-scientists, it provides a succinct and easy to read introduction to global climate modeling, downscaling and forecasting. For those looking for a more in-depth resource, the [Climate Impacts Group](#) website provides excellent links.

National Ecological Observatory Network (NEON)

The National Ecological Observatory Network (NEON) is a continental-scale ecological observation platform funded by the National Science Foundation. NEON will be the first observatory designed to

both detect ecological change and enable forecasting of its impacts. NEON will gather and synthesize data over 30 years on the impacts of climate change, land use change and invasive species on natural resources and biodiversity. Obtaining integrated data on these relationships over a long-term period is crucial to improving forecast models and resource management for environmental change.

A National Phenology Network

The USA National Phenology Network brings together citizen scientists, government agencies, non-profit groups, educators and students of all ages to monitor the impacts of climate change on plants and animals in the United States. The network harnesses the power of people and the Internet to collect and share information, providing researchers with far more data than they could collect alone.

CLIMATE SCIENCE NEWS

Nearly One Tenth of Hemisphere's Mammals Unlikely to Outrun Climate Change (paper attached).

A safe haven could be out of reach for 9 percent of the Western Hemisphere's mammals, and as much as 40 percent in certain regions, because the animals just won't move swiftly enough to outpace climate change. For the past decade scientists have outlined new areas suitable for mammals likely to be displaced as climate change first makes their current habitat inhospitable, then unlivable. For the first time a new study considers whether mammals will actually be able to move to those new areas before they are overrun by climate change. Carrie Schloss, University of Washington research analyst in environmental and forest sciences, is lead author of the paper out online the week of May 14 in the *Proceedings of the National Academy of Sciences (attached)*. "We underestimate the vulnerability of mammals to climate change when we look at projections of areas with suitable climate but we don't also include the ability of mammals to move, or disperse, to the new areas," Schloss said. Indeed, more than half of the species scientists have in the past projected could expand their ranges in the face of climate change will, instead, see their ranges contract because the animals won't be able to expand into new areas fast enough, said co-author Joshua Lawler, UW associate professor of environmental and forest sciences.

Oceans' salinity changed over last half-century

More water moved into and out of the atmosphere in 2000 than in 1950, making saltier parts of the world's oceans saltier and fresher waters less salty, researchers report in the April 27 *Science*. A warmer atmosphere may be to blame for changes in water cycle.

POLICY AND MANAGEMENT

Supporting Canada's Coasts Can Benefit Climate and Economy

Reversing the degradation of coastal ecosystems in Canada and elsewhere can play an important role in tackling climate change, while bringing additional benefits to biodiversity and the economies of coastal communities. This was the central message delivered by the United Nations Environment Programme (UNEP) and the International Union for the Conservation of Nature (IUCN) during an event held by the Convention on Biological Diversity (CBD) in Montreal. From Canada to Cancun, coastal ecosystems store high levels of carbon in their soil. This so-called "Blue Carbon" is found in tidal salt marshes, grassy meadows subject to the rise and fall of ocean tides, and their tropical cousins, mangrove swamps.

Despite Canada's cold climate, the country's salt marshes store as much carbon as in warmer climes, explains Dr. Gail Chmura, a coastal researcher at McGill University, who spoke at the UNEP side event.

Reversing the degradation of coastal ecosystems in Canada and elsewhere can play an important role in tackling climate change, while bringing additional benefits to biodiversity and the economies of coastal communities. In fact, Chmura and colleagues have calculated that the restoration of Canada's drained agricultural marshes will provide ecosystem services worth \$14,535 per hectare and a renewed sink for carbon dioxide equivalent to 6 per cent of Canada's original commitment for reductions under the Kyoto Protocol.

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